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ABSTRACT

The relevance of testing to curriculum is measured by the closeness of fit between test items and major program objectives. In this paper two procedures for analyzing the curriculum/test overlap are compared. The first method obtains a detailed analysis of a priority area of the curriculum. The process brings the curriculum into alignment with the test. It is a structured, sequential, rational, and objective method to be conducted by the classroom teacher. However, without structured available time and guidance from district administration, the analysis will probably not be accomplished. The process requires a long period of time to achieve a comprehensive appraisal of the match between the district assessment tool and curriculum. The second method involves an independent consultant who assesses the degree to which the district assessment tool measures objectives across content area and grades. The results are presented by subject area and grade level along with a statement of recommendations. This method results in a comprehensive assessment of the overlap between curriculum objectives and test items. The process is subjective and prone to inconsistencies. Achievement of changes in classroom practice by teachers is primarily dependent upon the district leadership's ability to see that innovations are implemented. (DWH)

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CHECKING FOR CURRICULUM/TEST OVERLAP: TWO METHODS DISCUSSED

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CHECKING FOR CURRICULUM/TEST OVERLAP: TWO METHODS DISCUSSED

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Curriculum/test overlap is an educational issue of considerable importance. Assessing curriculum/test overlap is one activity which characterizes an effective school. It is necessary to be able to speak to the effectiveness of an instructional program based on test data.

The major reason we measure achievement is to determine whether or not the instructional program is meeting written or unwritten objectives. To do this requires answers to two very important questions: (1) Are we testing what we teach? (2) Do we teach what we say we teach? This paper's focus is on the first question--that of relevance. The relevance of the test to the curriculum is measured by the closeness of fit between the items making up the test and the major objectives of the program. It should be the major criterion for test selection and use.

Two projects to assist two Alaskan school districts assess their curriculum/test overlap were completed by the author. The two projects resulted in very different procedures for analyzing the curriculum/test overlap and, eventually, different outcomes for the district. This paper presents a comparison of the two approaches. The advantages and disadvantages of each will be discussed. The two client districts will be referred to as School District A and School District B.

Checking for Curriculum/Test Overlap in School District A

In School District A (SDA), there was a concerted effort to strengthen and improve the schooling of its students. District goals and objectives had been developed and, with the assistance of a USED/ESEA Title II Basic Skills grant, SDA had directed its attention toward students' needs in the basic skills.

SDA requested assistance in helping teachers link test results from their district assessment to curriculum improvements, and ultimately, increases in student achievement. The SDA used the Iowa Test of Basic Skills (ITBS), published by Riverside Publishing, 1980. The curriculum/test overlap request was initiated by the Director of Elementary Education, who also managed the Title II grant. The curriculum/test overlap study was only one of many activities that had been initiated to improve student achievement in the basic skills, including training of administrators and teachers in effectiveness schooling research and techniques to increase student time-on-task.

SDA was led to request a process for analyzing curriculum/test overlap because of the very low student achievement scores on the ITBS. The Director of Elementary Education felt that there must be a way teachers could use the test information to assist in improving student achievement but did not know how to approach the problem.

The author made an onsite visit to further clarify the problem and determine the best approach to meeting the need. Teachers were interviewed for their current use of test data. It was discovered during this preliminary step that the teachers did not use the test data for decision-making about what and how they taught and expressed frustration over not really understanding the data, or how to begin to use it.

The clarification process led the author and director to conclude that it was a three-step problem: (1) teachers needed to know how to administer tests to students and how to assist students in taking tests (without, of course, unethical procedures); (2) the teachers needed to understand the meaning of the data they received on their students; and (3) they needed to know what to do about the data they received.

Clarification of the teachers' needs relative to the testing process and data interpretation and use made approaching the solution self-evident. The author and a colleague developed a guide for using test information to improve instruction. The main sections of the guide covered test administration skills for the teacher, test taking skills for the student, reading test reports, using test information for curriculum development and implementing direct instruction. It is the section on using test information for curriculum develoment which addresses curriculum/test overlap and presents a procedure by which to assess the overlap.

The teachers were trained in the application of the process. The training developed the capacity for each teacher to assess his/her own degree of curriculum/test overlap.

The curriculum/test overlap assessment presented to SDA in the guide comprises four activities. In the first activity, a grade level profile of skill weaknesses is created from the ITBS student list report (from the scoring service). The grade level profile leads to the identification of the weakest subtest skill area on the ITBS for a grade level of students. The weak skill areas are ranked, which allows teachers to quickly identify areas where students need assistance.

In the second activity, teachers identify a priority skill area on which to focus. A weighted decision-making guide was developed to assist teachers in making an objective assessment of the priority skill area.

Once the priority skill area is identified, the third activity leads one through an analysis of that skill area. The skill area is looked at in detail to determine exactly what is being tested by the ITBS. This is accomplished through a careful review of the Building Criterion-Referenced Skills Analysis. It results in a rank ordering of the subskill areas by weakest to strongest.

The fourth activity results in the overlay of curriculum onto the test. This step is less "objective"; no hard data are available to determine when a skill is being taught. The teacher must review his/her curriculum guides and indicate when and where and for how long a skill is taught.

Based on this very prescriptive analysis of the curriculum and test, in a priority area only, the guide further leads one through a development process to remediate any "holes" in the overlay. It is a process by which one brings the curriculum into alignment with the test, rather than leading to a single judgement about whether or not there is alignment. The process is structured, sequential and objective. It was to be done by the classroom teacher.

Advantages

This approach to assessing curriculum/test overlap has the advantage of being rational and objective. Because it is a structured and sequential process, there is an inherent degree of reliability in the judgements that will be made about the curriculum/test overlap. It is done by teachers who are familiar with the curriculum objectives and what is really being taught, thus increasing the reliability of the assessment. It is anticipated that going through such a step-by-step process could result in immediate changes in teaching practices that might result in improvements in achievement. By working with priority skill areas, it allows for a manageable approach to making changes in the curriculum. Once the priority skill area has been adequately addressed, the next priority skill area will be reviewed.

Disadvantages

There are two primary disadvantages of such an approach to assessing curriculum/test overlap. Without structured available time and guidance from the school district administration, it is likely the analysis will not be accomplished. The demands on teachers' time and attention may not lead to this becoming a priority activity in which to engage.

The second main disadvantage results from the advantage of a "bite size" approach. Except over time, the process does not result in a comprehensive appraisal of the match between the district-wide assessment tool and the district curriculum.

In addition, there was a change of personnel in SDA soon after the training of teachers in the process. Attention has shifted away from pursuing the completion of the curriculum/test overlap/development process. This hazard exists in any work situation. For the process to have any chance of impact, it will have to be fully implemented.

Checking for Curriculum/Test Overlap in School District B

School District B (SDB) requested a comprehensive analysis of the match between their district curriculum (all subject areas, all grades) and their district assessment tool (the Iowa Test of Basic Skills--ITBS and the Tests of Academic Proficiency--TAP). The teachers had expressed concern over the significantly low scores their students were receiving on the ITBS and TAP. They were concerned about whether or not the low scores may have reflected a poor match between what they taught and what was being tested.

The district director of instruction contracted to have the analysis done. The author of this paper conducted the study. The purposes of the assessment were (1) to assess the degree to which the ITBS/TAP test items measure SDB objectives across content areas and grades, and (2) to provide recommendations about those findings (i.e., implications for interpreting ITBS results, observations on or revisions of SDB objectives and possible next steps to best utilize ITBS/TAP or other test information).

The reviewer read each set of SDB objectives. The corresponding ITBS/TAP test items were then reviewed. Items which the reviewer judged to assess an objective were noted under the objective. Items left unassigned to an objective were noted in the margin. Two ratios were computed where possible: (1) number of ITBS/TAP items unassigned to the total number of ITBS/TAP items available, and (2) number of SDB objectives by grade level and by content area measured by at least one item to the total number of SDB objectives within that content area. These ratios were expressed as percents. Tables were created containing the ratios of actual numbers of items. The first ratio indicated how much of the ITBS/TAP was not "used." This provided an indication of the efficiency of the ITBS as measured by the degree to which its items measured the SDB objectives. Conversely, a second ratio was used to suggest the portion of the SDB curriculum addressed by the ITBS. This was to allow consideration of a review or rewrite of the SDB objectives, or that some objectives may need to be assessed in other ways (i.e., criterion-referenced tests, performance tests, observations, surveys, etc.).

The results of the analysis were presented by subject area and by grade level in a two-volume report to SDB. A brief narrative described the data displayed in an accompanying table of results. Any implications were discussed, and recommendations were made within the content area of analysis. A final statement of recommendations was made at the close of the report. The worksheets were included in an attached appendix.

Advantages

This particular approach to the curriculum/test overlap presents two distinct advantages, especially in comparison to that used with SDA. First, the curriculum/test overlap analysis was completed in its entirety. Second, it resulted in a comprehensive assessment of the match or overlap between their curriculum objectives and test items.

By contracting with an outside agency which could assign an individual to perform the analysis, SDB was assured of having the analysis completed. As seen with the in-district approach presented to SDA, it is all too likely, with the variety of issues pressing on a district's resources (time, money and people), that the analysis will never be done. If a district cannot structure time to have teachers perform the analysis for use of the information in their classrooms, then it seems to present a higher probability of success for either an in-district individual to be assigned to do the task (which requires a setting aside of other duties) or an outside consultant to be hired for the job.

Because the job was contracted, the district was able to achieve a comprehensive analysis of their curriculum objective/test item overlap. In contrast, SDA would have achieved an analysis of only part of their curriculum. To get a comprehensive analysis of the curriculum/test overlap in SDA would have required several "rounds" of effort. The net result of the approach taken by SDB was a comprehensive measure of the overlap at all grades, for all content areas.

Disadvantages

There are a few limitations to the study which must be considered when interpreting the results. The limitations, however, do not invalidate the results.

The first is the inherent subjectivity of the process of assigning items. The process of assignment was a decision on the part of one person, removed from the school district, determining if an item did or did not assess a given objective. The distinction was, more often than not, unclear.

The subjectivity leads to the second limitation--consistency. The task of assignment requires consistency in reasoning and judgement. Any individual or group will encounter these problems. Inconsistencies or shifting in standards of assignment were noted by the reviewer.

A third disadvantage is that to achieve any change in classroom practice on the part of teachers will require greater effort by the district. In the approach taken by SDA, teachers have first-hand experience with seeing when what they teach, or do not teach, is or is not tested. In SDB, teachers will have to be informed of the matches and discrepancies. In both school districts, some amount of administrative leadership will have to be exhibited to achieve a change in classroom practices.

In SDB, persistent administrative leadership has led to significant changes being set into motion as a result of the curriculum/test overlap. The report on the overlap was used to convince others of the need to revise their curriculum. In their words, "The analysis helped us decide to treat our curriculum objectives as a first draft and that they should be revised." SDB will probably keep the ITBS/TAP test system because of a strong longitudinal data base unavailable anywhere else in the state.

The revised curriculum will be put on microcomputer to create a data base. An item analysis will be on line to allow teachers to see which objectives are measured by which items and how their students are performing on those objectives. The system will also indicate what objectives are taught at which grade level, and the instructional materials and software available to teach those objectives. The total system is expected to be completed within a year.

Summary and Conclusions

One characteristic of an effective school is its attention to curriculum alignment and achievement data. This paper has discussed two methods by which two Alaskan school districts focused their time and attention onto curriculum alignment and test data. The two methods resulted in two very different outcomes for the respective districts--one achieved a comprehensive analysis of its curriculum/test overlap by an outside consultant and one obtained a very detailed analysis, by classroom teachers, of a priority area of the curriculum .

Advantages and disadvantages accompany both methods. The difference in the usefulness of the two methods, however, rests with the leadership to see them put to use.

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